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Command and Staff College  
Marine Corps University  
2076 South Street  
Marine Corps Combat Development Command  
Quantico, Virginia 22134-5068*

# ***MASTERS OF MILITARY STUDIES***

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## **BALLISTIC MISSILE DEFENSE AND CHINA: MILITARY TECHNOLOGIES, CHINA'S PAST, AND SHAPING THE WORLDS FUTURE**

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## **Executive Summary**

**Title:** Ballistic Missile Defense and China: China's Past, Military Technologies, and Shaping the World's Future.

**Author:** Major Steven M. Kokora, United States Air Force

**Thesis:** Considering how missile defense systems will affect China's Air Force and Ballistic Missile inventory, how will China respond to the U.S. plan to develop missile defense systems and what can the U.S. do to mitigate any negative repercussions?

**Discussion:** The United States has chosen to withdraw from the 30 year Anti Ballistic Missile (ABM) Treaty with Russia which will allow it to develop and produce a theater missile defense (TMD). The People's Republic of China (PRC) seeks to become the dominant power in the Asian Pacific region through the acquisition of advanced technology and weapons systems like the Soviet SU-27 and the proliferation of its conventional and nuclear missile arsenals. The eventuality of U.S. TMD has the potential to decrease the credibility of both types of weapons for which China has paid so much.

To assess what the possible reactions to the implementation of TMD may be this paper will discuss China's past as it applies to their quest to be respected as a world power. I will propose how the PRC may react to TMD it will then emphasize some of the events seen in the media that paint the PRC a ruthless government with hegemonic intentions. The paper will then assess the credibility of the People's Liberation Army Air Force (PLAAF) and China's missile arsenal and how missile defense will then affect these parts of China's military. Considering China's recent behavior and the affect of TMD on its military the paper will attempt to predict some of the possible reactions to the implementation of TMD. Finally, to mitigate the effect of the potential reactions several suggestions will be recommended to minimize negative political and military consequences.

**Conclusion:** China has taken great strides to upgrade its military to become more modern and competitive with other nations in the region and the U.S. While China maintains a credible deterrent capability in the form of its nuclear missile arsenal and a credible offensive capability in its short and medium range conventional missiles its air forces are inadequate. Even though the PLAAF has purchased the Soviet Su-27, the training and experience of its pilots is suspect. The other fighter aircraft in its inventory, while vast in numbers, are antiquated and would be ineffective against any coalition involving the U.S. China's other aircraft are also old and disadvantaged and it lacks essential modern support aircraft, like the airborne, warning and control system (AWACS) aircraft, and the doctrine to successfully prosecute a "U.S. style" air war.

Missile defense would severely decrease the credibility of both the PLAAF and China's missile arsenal. The implementation of TMD is expected to be met with opposition and an effort to reestablish China as a credible and competitive military power. In an effort to mitigate any arms race that may ensue, the U.S. should guard against weapons proliferation and be ready to assist China to advance in other ways that will keep it from pursuing hegemonic goals and evolve from its confrontational past into a constructive future.

## **Chapter One**

### **Introduction**

The treaty between the United States and the Soviet Union on the limitation of anti-ballistic missile systems (ABM) was signed in Moscow on May 26, 1972<sup>1</sup> and was intended to help maintain nuclear stability between the world's only superpowers. With the advent of technologies that could decrease the credibility of either side's nuclear threat, the treaty limited advances critical to developing a national or theater ballistic missile defense to maintain the balance between the two Cold War competitors so that both could continue to have mutually assured peace through the threat of mutually assured destruction. At the time, foresight did not predict that there would be other countries that would develop a credible nuclear threat. One possibility the treaty did not allow for was that the stability of the "balance of destruction" would be threatened by other countries as they developed nuclear capabilities. Today that stability is threatened.

With the collapse of the Soviet Union in 1990, the threat of a global nuclear conflict seemed to fade and the United States and the former Soviet Union could no longer be seen as strategic nuclear adversaries. Although the ABM treaty was still in place, the threat of a full scale nuclear conflict seemed to wane.

Until the collapse of the former Soviet Union in 1990, superpower stability in the world was a function of the two major superpowers not being in a crisis. Today, with the proliferation of nuclear capable states and a more globally linked economy, stability in the world cannot be reduced to the relationship between these two states alone. New

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<sup>1</sup> *Treat Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-ballistic Missile Systems*, 1972, URL: <http://www.state.gov/www/global/arms/treaties/abm/abm2.html>, Accessed on 28 October, 2001.

regions of military capability and economic importance determine whether or not there is stability; not only in a certain sphere, but in the entire world. Since the signing of the ABM Treaty, that is what the Asian-Pacific region has become.

There is ample evidence that stability in the world economy is now more dependent on stability in the Asian-Pacific region. Until recently, stability in the region was a function of superpower peace and U.S. presence to inhibit any hegemonic aspiration. The equation, however, is changing. China, India, and Pakistan have developed nuclear capabilities and North Korea, Iran, and Iraq are tireless in their pursuit of Weapons of Mass Destruction (WMD). Added to this, the ability to employ those weapons now makes the rest of world subject to the consequences of Asian – Pacific instabilities. It seems that without signing arms agreements with all countries involved - a veritable impossibility – developing ballistic missile defenses would be a reasonable pursuit. The only obstacle for the U.S. would be that the ABM Treaty was still in place.

On 13 December, 2001 President George W. Bush gave Russia the required six month notice that the U.S. would withdraw from the ABM Treaty.<sup>2</sup> Bush stated, “...the ABM Treaty hinders our government’s ability to develop ways to protect our people from future terrorist or rogue state missile attacks.” This marks the first time in history where the U.S. has pulled out of a seemingly critical agreement dealing with the military balance of superpower nations. In light of the events of 11 September, 2001<sup>3</sup>, Bush had the political leverage and the opportunity to withdraw from a major treaty, unilaterally, without suffering major backlash from countries around the world. Aside from Russia,

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<sup>2</sup> Steven Mufson and Dana Milbank. *U.S. Sets Missile Treaty Pullout*, The Washington Post, December 14, 2001. p. 1.

<sup>3</sup> Rick Hampson. *Minute by Minute, Fear Envelops the Country*, USA Today, September 12, 2001. p. 1

there was only one other major country which expressed, however muted, their concern: The Peoples Republic of China (PRC).<sup>4</sup>

China wants all the advantages of international trade to develop their economy and also wants to be seen a superpower. The possibility of a U.S. Ballistic Missile Defense (BMD) erodes the perception of Chinese military dominance in the region. With its massive population, increasing military capability, and growing prominence in world markets, China has become one of the most crucial countries to the stability of the Asian Pacific region. As the world ascends into a more global economy, relations with China have become the constant concern of the U.S. diplomatic effort. As China is the most dominant military force in the region<sup>5</sup>, and seeks leadership in their own backyard<sup>6</sup>, its relationship with the rest of the world is now more critical than ever. The U.S. wants the advantages of stable trade but is not yet ready to trust China with the military security of the region.

Before we can begin to analyze how the PRC will react to any U.S. policy changes, it is imperative to understand some of the issues that shape the way the world views China and some of the cultural nuances that shape the strategic culture of China. This paper will analyze factors that influence Chinese actions, its military potential and the potential effect of proposed U.S. ballistic missile defenses. The analysis will then focus on Chinese response to the development and deployment of BMD in the Asian

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<sup>4</sup> Philip P. Pan, *Russia, China Back ABM Pact, Quick End to Afgan Fighting*, The Washington Post, October 21, 2001, p. A24.

<sup>5</sup> Paolo Pasicolan, ed. *U.S. and Asia Statistical Handbook 2000-2001*, p. 63. Total regular forces of 2.48 million, 4,086 combat aircraft and over 1500 ballistic missiles, some with nuclear capability.

<sup>6</sup> Hung-Mao Tien and Yun-Han Chu. *China Under Zemin*, Lynne Rienner Publisher, Boulder, Colorado, 2000, p. 111.

Pacific region and finally suggest possibilities for engagement that will allow the U.S. to develop and deploy BMD while shaping Chinese response and future relations.

## **Chapter Two**

### **The Victim Mentality**

There are few greater instigators of nationalist sentiment than that of a people, or a nation, which feels that they have been wronged or oppressed. The longer and greater the oppression, the more the people of the nation will accept strong, even tyrannical, leadership.

China is a prime example of a country and a people who have felt oppressed and found leaders that have harnessed the nationalistic sentiment brought about by the sense of being victimized. The collective memory of China is wrought with a millennium worth of feeling “the victim.” Orville Schell writes, “...the collective memory of “national humiliation” is one to the most resistant parts of China’s historical legacy.”<sup>7</sup>

Chinese Lt Gen Li Jijun reiterates this in an address to the U.S. War College:

Before 1949, when the People’s Republic of China was established, more than 1000 treaties and agreements, most of which were unequal in their terms, were forced on China by the Western powers. As many as 1.8 million square kilometers were also taken away from Chinese territory. This was a period of humiliation that the Chinese people can never forget. This is why the people of China show such strong emotions in matters concerning our national independence, unity, integrity of territory, and sovereignty. This is also why the Chinese are so determined to safeguard them under any circumstance and at all costs.<sup>8</sup>

This shared idea among the Chinese has created a (real or imposed) belief in a “never again” mentality that can be shaped to fit hand in hand with government

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<sup>7</sup> Orville Schell, *Prisoner of its Past*, on line edition, Salon Magazine, URL: <http://www.salon.com/news/feature/1999/06/08/china/index.html>. 27 October, 2001.

<sup>8</sup> Li Jijun, Lieutenant General, “*Traditional Military Thinking and The Defensive Strategy of China*”, Address to the United States War College, August 29, 1997.

objectives. Combine that with the centuries old idea that the vast majority of the Chinese population are linked genetically, ethnically, and culturally<sup>9</sup> and it follows that, whenever a bit of nationalistic zeal is required to back the objectives of whomever is in power, all that is required for widespread support of policy invoke the collective memory of foreign oppression. Nationalist groundswells, for the purpose of creating a strong state impervious to imperialist repression,<sup>10</sup> have always been the preferred method to legitimize government actions.<sup>11</sup>

### Chapter Three The PRC in the Eye of the Media



Considering the relative ease with which the PRC has been able to rally and maintain support it is plain to see that under the guise of “for the betterment of the people” the PRC has been able to take control in all social, economic, religious, and political undertakings. This iron-handed control is popularly seen in the media as the suppression of freedom of the

<sup>9</sup> Frank Dikötter, *Nationalist Myth-Making: The construction of the Chinese race*, on line edition, Human Rights in China, URL: [http://iso.hrichina.org:8151/iso/article.adp?article\\_id=606](http://iso.hrichina.org:8151/iso/article.adp?article_id=606). 20 December, 2001.

<sup>10</sup> Dingxin Zhao, *The Power of Tiananmen*. University of Chicago Press, Chicago, 2001, p. 57.

<sup>11</sup> Tien and Chu, p. 172.

speech,<sup>12</sup> the press,<sup>13</sup> religion,<sup>14</sup> and lack of adherence to basic human rights.<sup>15</sup> China watchers would also be quick to point out government failures in controlling state owned enterprises, its barbaric “one child” policy,<sup>16</sup> and how the PRC’s potential as a regional hegemon<sup>17</sup> with racist tendencies<sup>18</sup> goes virtually unchecked by the Chinese media.

The core of what western observers might call Chinese “spin” and is critical to understanding how the PRC may react to world events. To the PRC, it doesn’t matter if crooked ways are used in the conduct of affairs, the ends will justify the means.<sup>19</sup> This method of changing tactics from straightforward to indirect (often corrupt) is seen as just good tactics. Therefore, using other than transparent methods is actually considered crafty<sup>20</sup> and therefore wise and above reproach.

Necessity, however, has again proven to be the mother of strange bedfellows. Although the PRC is often seen as a bad actor it is also the world’s most populous country and is critical to the world economy. So for all of its alleged atrocities the world

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<sup>12</sup> June Grasso, Jay Corrin, & Michael Kort, *Modernization and Revolution in China*, M.E. Sharpe, Inc, Armonk, New York, 1997, p. 261.

<sup>13</sup> John S. Pritchett, *Hong Kong Cartoonist*, URL: [www.pritchettcartoons.com/hk\\_cartoonist.htm](http://www.pritchettcartoons.com/hk_cartoonist.htm) 20 December, 2001.

<sup>14</sup> *China jails accused over Falun Gong*, on line edition, CNN, URL: <http://asia.cnn.com/2001/WORLD/asiapcf/east/08/19/china.fgong/index.html>. 20 December, 2001.

<sup>15</sup> Wei Jingsheng, *Standing up to Authority with Wei Jingsheng Interview: Tong Yi*, on line edition, HRIC, URL: [http://iso.hrichina.org:8151/iso/article.adp?article\\_id=71&category\\_id=27](http://iso.hrichina.org:8151/iso/article.adp?article_id=71&category_id=27). 22 December, 2001.

<sup>16</sup> Ivo Dawney, *Defector reveals the horror of China’s One Child Law*, Sunday Telegraph, 14 June 1998, on line edition, URL <http://www.laogai.org/news/pc/suntel.html>. 21 December, 2001.

<sup>17</sup> *Population Transfer and Control*, The Government of Tibet in Exile, on line edition, URL: <http://www.tibet.com/WhitePaper/white8.html>. 21 December, 2001.

<sup>18</sup> Frank Dikötter, *The Construction of the Chinese Race*, on line edition, HRIC, URL: [http://iso.hrichina.org:8151/iso/article.adp?article\\_id=606](http://iso.hrichina.org:8151/iso/article.adp?article_id=606). 21 December, 2001.

In the case of Tibet, although it was not formally attacked, it seems clear that the CCP had made great effort to minimize the native population with transplanted Han (more genetically pure Chinese) until Tibetans have no ability to claim their political or ethnic sovereignty. This infiltration, and overwhelming of genetically different peoples for the purpose of making the population more “Chinese” could be assimilated with ethnic purification or cleansing without bloodshed.

<sup>19</sup> Gerald Chan, *Chinese perspectives on International relations*, New York, St Martin’s Press, p. 19.

<sup>20</sup> Sun Tzu, *The Art of War*, trans Samuel B. Griffith, Oxford, Oxford University Press, 1963. Sun Tzu’s theory of adaptability requires that one must be flexible and often adapt his tactics to the enemy situation.



at large needs to maintain trade and promote stability with China. The remaining chapters will bring together an assessment of China's air and missile forces, how BMD could affect Chinese capability, possible Chinese reactions to U.S. BMD deployment in the Asian Pacific region, and finally suggest direction for further relations with China.

## **Chapter Four**

### **Military Capability**

During the 1990's China went to great lengths to establish a more credible and modern military. Throughout Mao's era it was believed that the military had to be very large to maintain internal security, today the mindset of military planners has changed to reflect that the battle that will have to be fought will be regional, short, and decisive. This would call for a smaller army but increasingly capable air, ballistic missile and naval forces that could project power into areas under dispute like India, or Pakistan, (two recently nuclear players) or to make possible a coerced reunification with Taiwan.

As only the most modern and destructive systems would be affected by missile defense systems it is critical to know the capability for these forces in the event that China were to adopt a "use it or lose it" response to BMD. Since only the air and ballistic missile forces would most readily be affected by BMD. To rule out a "worst case" response, this chapter will assess the weapons platforms and credibility of both types of forces with respect to their regional and U.S. competition, what improvements may be on the horizon, and offer some comment on just exactly how well China ranks as a military threat.

#### Air Force

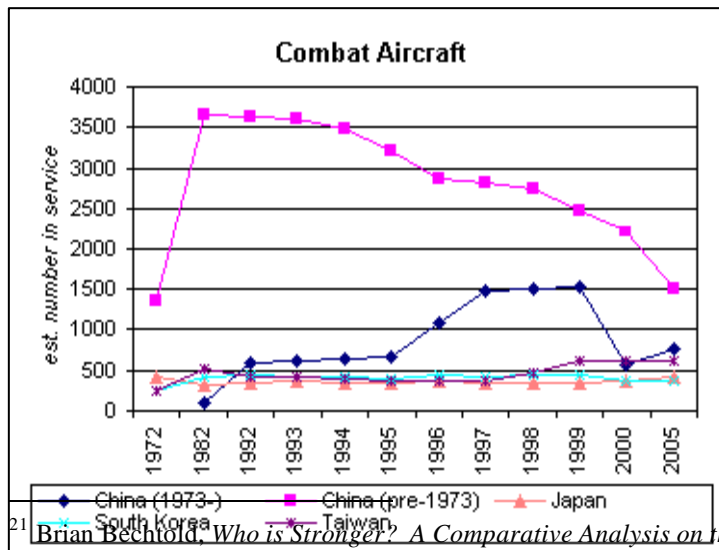
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Intellectual pliancy "distinguishes the experts in war." In fact, a person of reasonable stature would be politically correct if they became indignant at being accused of using less than consistent methods.

One of the services that must be taken into account when considering the capabilities of the Chinese military is the PLA Air Force (PLAAF). The high tech brand of warfare demonstrated by the coalition forces during the Gulf War has affected the ideas of Chinese military planners so greatly that in the last ten years China has taken great strides to purchase a modern and competitive air force. The assessment of the PLAAF following the review of the Gulf War was that it had major shortcomings in fighter capability, command and control, airborne early warning (AWACS type aircraft), force projection (aerial refueling), and weapons technology and ordinance accuracy (smart bombs). To determine the credibility of the PLAAF this paper will analyze the type and numbers of aircraft (against their obsolescence), capabilities of pilots, command and control, resources to sustain combat.<sup>21</sup>

### Combat Aircraft

As far as sheer numbers are concerned, it would appear that China would have a distinct advantage over any of the combined air forces of the region. Total numbers



however are quite misleading as the number of fourth generation aircraft are very small. The reality of these numbers is that even though there may be as many as

<sup>21</sup> Brian Bechtold, *Who is Stronger? A Comparative Analysis on the Readiness and Capabilities of the North and South Korean Militaries*, Article presented to North East Asian Studies elective, Marine Corps University, Command and Staff College, spring, 2002. This is a modification of the model used to assess Korean military capabilities.

3000<sup>22</sup> combat aircraft, the PLAAF only has around 100 Su-27s (and its variants) and some 250 J-8s.<sup>23</sup>

The Su-27 is seen as a formidable platform in any U.S. fighter aviator's assessment, but the J-8 is a twin engine variant of the 1960's built Soviet MiG-21 whose airframe is underpowered and is only considered because of its avionics package which includes Doppler look-down radar.<sup>24</sup> The remainder of the combat aircraft is mostly J-7 (single engine MiG-21) which is assessed to have no credible capability against the F-15 and F-16.<sup>25</sup>



Once the PLAAF realized that its most proliferated fighter, the J-7<sup>26</sup> was an inadequate match to US aircraft, it purchased the SU-27. The Russian built "Flanker" is considered

in the same class as the best U.S. fighters and approximately 100 are in the PLAAF's inventory. Furthermore, China has is also under license to build 200 more under the designation J-11.<sup>27</sup> To compliment the SU-27 the



<sup>22</sup> The Military Balance, London, Oxford University Press, 2000, p. 196.

<sup>23</sup> Ibid, p.197.

<sup>24</sup> *The Vital Guide to Military Aircraft*, Robert Hewson ed, Shewsbury, England, Airlife Publishing Ltd, 2001, p. 102. Photos from the same.

<sup>25</sup> Steve Macko, *ERRI Assessment of Chinese Military Capability*, online edition, URL: [www.emergency.com/chinamil.htm](http://www.emergency.com/chinamil.htm) 20 February, 2002. Combat Aircraft graphic also.

<sup>26</sup> The J-7 or F-7 is a Russian MiG-17, a Korean War era fighter that poses no threat to fourth generation fighter aircraft like the F-15 or F-16. The F-15 and F-16 are the most exported US fighter aircraft in western inventories and also the standard by which other aircraft are matched. As the next generation of U.S. fighter aircraft come into operation, namely the F-22 and the Joint Strike Fighter (JSF), the F-15 and F-16 will be soon be seen as second rate

<sup>27</sup> *The Vital Guide to Military Aircraft*, p. 110.

PLAAF also purchased the AA-10, and AA-11 air-to-air missiles to give them the greatest capability the Russians could sell. To this end however, combined current inventories of AA-10 Alamo and AA-11 Archer are estimated at 500. With this small number of missiles and the inability to produce them internally, it leaves little room to expend these weapons in training pilots and allow suitable numbers for a protracted air campaign.

### Pilots and Training

The next phase of the assessment would be to assess the abilities of the pilots. The number of training hours for J-7, J-8, and Su-27 pilots is reported at less than 100 per year.<sup>28</sup> Also considering that China holds no exercises (or fought in aerial combat) with other countries having capable air forces, this would indicate another critical shortcoming in capability.

In contrast, U.S. fighter pilots train at a yearly average around 212 hours and participate in various “Flag”<sup>29</sup> exercises from year to year. For fighter pilots who are stationed outside of the U.S., they will normally participate in similar exercises with local air forces like the U.K.’s Royal Air Force or the German Air Force.

More importantly, however, is the large number of U.S. fighter pilots who have actually seen combat. With the varied number of “real world” operations that have taken place in the Gulf War, Operation Deny Flight (Bosnia), and Noble Anvil (Serbia) many

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<sup>28</sup> *The Military Balance*, p.196.

<sup>29</sup> “Flag” exercises as they are commonly called originate from Red Flag, the most common air combat exercise flown from Nellis AFB, NV and are held every three weeks nearly year-round. During these exercises, an “Air War” is fought that is so comprehensive that it takes into account nearly all of the airborne missions of not just fighter aircraft, but tanker, electronic combat, ground attack, command and control, stealth, and transport aircraft. An average Red Flag may consist of over 100 U.S. or NATO aircraft. “Flag” type exercises may have special emphasis or different location and are designated other than “Red”. Green Flag would be a Red Flag with an electronic attack slant while a Maple Flag would be a Red Flag which takes place in Canada.

U.S. pilots have actual combat experience. This experience in real-time combat has a profound effect on the combat capability of both the pilots themselves and the next generation of pilots that they will instruct in the years to come.<sup>30</sup>

These critical shortfalls in pilots proficiency and training suggests that while the PLAAF may have some capable Russian platforms, its pilots do not have the hours for proficiency, the missiles required to train with, and basic exercise or combat experience to have a competitive air force. This failure in pilot abilities was certainly demonstrated in the mid air collision of a J-8 and an U.S. Navy EP-3.

### Command and Control

Airframes and pilots are not the only place where the PLAAF is lacking in its quest for credibility. Command and control aircraft is another area where the PLAAF falls short. These airborne warning and control system (AWACS) aircraft, while usually large and not very maneuverable, would seem to be easy targets in the modern aerial combat arena. While these converted passenger aircraft offer no direct threat to the enemy, they are used to direct the air war and therefore become a force multiplier.



Fighters acting alone or in flights have only a certain portion of the “air picture” and cannot see the whole battlespace and act in

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<sup>30</sup> At one point in 2000, ALL of the pilots in the 7<sup>th</sup> Fighter Squadron, the training unit for the F-117, had combat time in Iraq, Bosnia, or Serbia. This had a profound affect on the training of new pilots as the instructors could actually tailor training to actual combat. Many fighter units throughout the USAF and US Navy community experienced the same effect.

concert with other friendly aircraft. With an AWACS-type platform, airborne controllers can break down the entire battlespace and direct its fighters in the effective intercept of enemy aircraft. The old fighter adage of “first with sight is the first to the fight” is particularly true when the first shots fired are with the “eyes” of a radar contact (well beyond the human capacity especially at night) and most employment tactics begin with a salvo of air to air missiles launched beyond visual range (BVR) prior to “the merge”.<sup>31</sup> It does little good to have a capable missile like the AA-10 and then not be able to employ it BVR because the pilot cannot (visually or otherwise) identify the aircraft he is about to fire on as friendly or enemy.

While airborne early warning (AEW) aircraft can help fighters offensively, they can also help defend friendly aircraft from unobserved attackers. This is essential in force protection and saving the fighters to “live to fight another day.” AEW aircraft therefore play as critical a role maintaining one’s force and making it more effective as well as more survivable. It is a role not yet filled in the PLAAF.

### Sustainment

Realizing that purchasing weapon systems alone does not make a great air power, China has moved to create the ability to produce the weapons domestically; this is what is referred to as sustainment. The ability to produce all manner of weapons systems from the spare parts to the support aircraft to the force extension aircraft is something that the Chinese industrial base does not yet have. Only technology-based production facilities with the skilled labor, engineers, and scientists required make this a reality. China has

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<sup>31</sup> “The merge” is referred to as when opposing aircraft have come together from any aspect and the fight goes from a long range missile shot BVR to a maneuvering contest where both aircraft try to fly to a position generally aft of the other aircraft and into weapons parameters. The merge is where “dog fighting” takes place.

become Russia's number one client when it comes to purchasing military hardware due to the simple fact that its technology base has not advanced far enough. The major problem for China is that Russia does not yet allow China to produce all of the associated parts and pieces required and China has not yet been able to reverse engineer the technologies required to make this happen.

As previously mentioned, the Su-27 is under contract to be produced at Shenyang. This contract however ensures that at least 30 percent of the aircraft be built with parts that come from Russia. Some of these parts not allowed to be independently produced in China are the engines for the Su-27.<sup>32</sup> This means that at least for engines and other technology dependant systems not yet reverse engineered, the PLAAF does not have the ability to sustain its fleet of aircraft. This can have a tremendous impact on combat capability.

Russia is also the primary dealer in support aircraft and has sold IL-78 tankers and the IL-76 transports (to be converted into tankers) for the purpose of force extension. China hopes that all of its purchases will allow it to run an U.S. style air campaign but again has not committed the funds required to bring its industrial base up to speed. Part of the problem here is that the PLAAF is not an independently run service and has to compete for funds within the PLA.

What is clear is that China lacks the money, the "air-minded" leadership, and the technological base to manufacture hi-tech fighter and support aircraft, adequately train its

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<sup>32</sup> *Jane's All the World's Aircraft: 2000-2001*, Surrey, UK, Jane's Information Group Ltd, 2000. To emphasize the importance of sustainment, of the 24 Su-27 that were stationed at Liancheng, 17 were damaged in a hurricane of which 3 were beyond repair. Another two were lost in crashes leaving only 19 unless more are to be purchased from Russia. This is in contrast to the sometimes flippant way that U.S. pilots often speak of the F-16, which has the highest aircraft loss rate of any U.S. fighter. The F-16 is sometimes referred to as "The Dorito" with a reference to the advertisement which states, "Eat all you want, we'll make more."

pilots, and sustain its weapon systems within their own means. These concerns alone will keep China a generation of technology behind the U.S. for at least the next 20 to 30 years.<sup>33</sup>

### Transport Aircraft

Although winning the air war is the first step in any major conflict, the ability to exploit air superiority comes when its time to move troops effectively into the area of interest. In the PLAAF the bulk of their transport capability is carried out by Y-5, Y-7, and Y-8 aircraft. There are 300 Y-5 aircraft with a capacity to carry 10 paratroops per sortie or about one ton of cargo.<sup>34</sup> The Y-7 (45 aircraft) and Y-8 (68 aircraft) are both copies of Russian transport aircraft with the capacity to carry around 50 troops or about 10 tons of cargo.<sup>35</sup>

In contrast, the USAF has nearly 600 C-130 aircraft in the active inventory and over 300 in the National Guard and Reserve.<sup>36</sup>



tons of cargo.<sup>37</sup> But again, the numbers do not tell the whole story. While the

<sup>33</sup> Bates Gill and Michael O'Hanlon, *China's Hollow Military*, online edition, Brooks Institute, URL: [www.brook.edu/views/articles/ohanlon/1999natint\\_sum.htm](http://www.brook.edu/views/articles/ohanlon/1999natint_sum.htm). 27 October, 2001.

<sup>34</sup> *Janes's All the World's Aircraft, 2000-2001*. The Y-5 is a 1950's vintage bi-plane (a Soviet An-2 Colt) with upgrades in avionics and engines. Even in great numbers they are considered "targets" with little impact on tactical airlift. The descriptor "targets" is used as in U.S. fighter pilots lexicon, "There are two types of aircraft.....fighters and targets."

<sup>35</sup> *The Vital Guide to Military Aircraft*, pps. 7-8.

<sup>36</sup> USA, *Airforce, Armed Forces, Structure*, online edition, Periscope, URL: [www.periscope.ucg.com/nations/usa/usa/airforce/index.html#equip](http://www.periscope.ucg.com/nations/usa/usa/airforce/index.html#equip). 20 February, 2002.

<sup>37</sup> *The Vital Guide to Military Aircraft*, p. 64.



PLAAF has many hundred smaller transport aircraft this still would be inadequate to transport the thousands of soldiers required for a successful airlift support. Even if 100 Y-7 and Y-8 aircraft could be generated for troop movement and the deployment was uncontested each aircraft would have to make 5 round trips before 25,000 troops alone could be airlifted to a combat zone. This shortfall does not begin to make up for the numbers required to supplement an amphibious assault. Even assuming the PLAN could use all of its Yunnan (nearly 300) and Yuliang (31) class landing craft to land troops, the required tonnage of support equipment and supplies could not be transported by the PLAAF.<sup>38</sup>

One final note about the assessment of the PLA's air capability is that there is no fixed-wing naval component. This lack of a force projection from the sea is a major shortcoming considering the initial U.S. response to any aggressive action taken by China would come from forward based aircraft from either fixed locations in Japan or South Korea or from carrier based aircraft. China has set out to acquire impressive naval weapons systems but has neither the internal industrial capacity to build and sustain its navy, nor the combination of surface and subsurface vessels to project a complete force similar to the U.S. Navy's carrier battle group.

In contrast, the U.S. owns 13 aircraft carriers<sup>39</sup> and normally fields between 6 and 8 carrier battle groups at any given time. Each carrier group is equipped with a compliment of fighter, attack, support, and rotor aircraft. The normal compliment of fighter aircraft is usually one squadron of F-14 Tomcat, and two squadrons of F-18

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<sup>38</sup> *China, Navy, Armed Forces Structure*, online edition, Periscope, URL: <http://www.periscope.ucg.com/nations/asia/china/navy/index.html#equip>. 20 February, 2002.

<sup>39</sup> *US and Asia Statistical Handbook*, p.47.

Hornets.<sup>40</sup> Therefore, in a two-carrier group response there are automatically around 150 aircraft of which approximately 100 would be considered “fighters”.

### Missile Arsenal

The most essential factor in China’s belief that it is a world power is its missile capability. For many decades world power was measured on the ability of a country to



assert a nuclear deterrent force and China’s, however small, is significant and growing. Of the approximately 1500 missiles in their inventory only four types of missile could reach the U.S. with nuclear

payloads and some of those are still in development.<sup>41</sup> The most serious aspect of the China’s nuclear potential is that it has begun to develop Multiple Independently Targeted Reentry Vehicle (MIRV) technology<sup>42</sup>. This capability which is being developed in the DF-41 or incorporated into the DF-5<sup>43</sup> could mean a significant increase in deterrent credibility and a significant threat to the western hemisphere and Europe.

The vast majority of China’s “Second Artillery” is composed of conventional missiles with ranges less than 2,000 miles and the majority of those have a range of less

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<sup>40</sup> US, Navy, *Armed Forces Structure*, online edition, Periscope, URL: <http://www.periscope.ucg.com/nations/usa/usa/navy/index.html#equip> 1 nov, 2001. The F-14 and F-18 are considered comparable to the F-15 and F-16, respectively.

<sup>41</sup> Jack Spencer, *The Ballistic Missile Threat Handbook*, Washington DC, The Heritage Foundation, 2000, p. 22

<sup>42</sup> *The Cox Report: U.S. National Security and Military/Commercial Concerns with the People’s Republic of China*, on line edition, House of Representatives, URL: <http://www.house.gov/coxreport/cont/gncont.html>. 1 April, 2002. allegedly acquired from the U.S

<sup>43</sup> Spencer, p. 20. The CSS-4 is the U.S. designation for the DF-5. The illustration is reprinted from the handbook and illustrates the range of the missile when pointed toward the Western hemisphere.

than 500 miles. This would indicate that the intention and doctrine for employment would be in local or regional conflicts. The abundance of short range missiles also indicate how comparatively inexpensive these weapons are to build and maintain. Short range ballistic missiles are generally solid fueled and can be simply stored with little expenditure for maintenance. Longer range missiles, ICBM and IRBM, which are liquid fueled require skilled operators, extensive maintenance, and readily available liquid fuels

### Chinese Ballistic Missile Capabilities<sup>44</sup>

System	Alternative Name	Missile Type	Export Customers	Max Range (mi)	Conv Payload(lb) or Nuclear Yield	Inventory	Status
CSS-2	DF-3	IRBM	Saudi Arabia	2,500	4,740/1.3mT	60-80	Deployed
CSS-3	DF-4	IRBM		3,400	2mT RV	20	Deployed
CSS-4	DF-5	ICBM		7,500	5mT RV*	20	Deployed
CSS-5	DF-21	IRBM		1,100	1,322/250kT	35-50	Deployed
CSS-5 Mod 2	DF-21X	IRBM		1,864	1,322/250kT	unk	Deployed
CSS-6	DF-15/M-9**	SRBM	***	372	1,100	650	Deployed
CSS-7	DF-11/M-11**	SRBM	****	186	1,763	200	Deployed
CSS-8	M-7**	SRBM	Iran	94	418	500	Deployed
CSS-N-3	JL-1	SLBM		1,200	250kT		Deployed
CSS-NX-4	JL-2	SLBM		5,000	1,543/250kT		Development
CSS-X-9	DF-31	ICBM		5,000	1,543		Tested
CSS-X-10	DF-41	ICBM		7,500	*		Development
DF-25		IRBM		1,553	4,409/MIRV		Development

\*Possibly MIRVed

\*\*Export Name

\*\*\*Egypt, Iran, Libya, N.Korea, Pakistan, Syria

\*\*\*\*Pakistan, Iran, Syria

on hand for fueling prior to launch.

This would indicate that although China has an intercontinental capability, it does not care to have the sheer numbers of the U.S. or the former Soviet Union as this would take an incredible amount of the available budget for weapons that are not likely to be

<sup>44</sup> The chart is a compilation of *The Ballistic Missile Threat Handbook, Strategies for U.S. Relations with China*, and the *Periscope* website.

used. This is one of the recurring themes when trying to assess China's military capabilities and intentions as there is only significant spending in systems that have actual utility. Because China has a significant number of short range missiles it can be said that its conventional missile inventories are credible and abundant and that the most likely course of action would be in a conflict less than 500 miles from its border.

## **Chapter Five Assessment**

In sizing up the PLA and determining its potential for warfighting with respect to the PLAAF and the conventional and nuclear missile force, these must be considered as they would be used in a real world course of action. With respect to China's nuclear force, it must be clear that ANY country with nuclear delivery capability must be considered credible.

China's nuclear deterrent is credible, however minimally so.<sup>45</sup> Although the total number of nuclear warheads is not the primary indicator of credibility, the ability to deliver a nuclear weapon across the globe with reasonable accuracy is all that is required to garner the caution of the U.S. and other countries. Therefore, concerning China's nuclear capability, it has attained the status it worked so hard to achieve and the world recognizes China as a major nuclear power.

The most likely conventional scenario would be an invasion of Taiwan. As it would seem unlikely that nuclear weapons would be used in such an assault, we need

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<sup>45</sup> While the U.S. and the former Soviet Union currently have upwards of 6000 deliverable warheads, the stockpiles of Soviet warheads is estimated at 10,000 to 12,000. The START II treaty only limited the number of delivery vehicles for the warheads. This is why the world got to see the destruction of Soviet missiles and the destruction of B-52 aircraft publicly as these were the delivery mechanisms. The warheads themselves, for the most part, remain intact and in storage. Hence, The Soviets may have 12,000 warheads but no means to deliver them and the international community is OK with that. China is a concern because

only consider the conventional capability seen in the PLAAF and the conventional missile inventory

Conventionally speaking, China's military is on the rise but has yet to achieve the goal of becoming a competitive conventional military power. While China has considerable ground forces, it has yet to modernize major aspects of its air forces. The PLAAF is still flying aircraft designed in the 1950s and only in the last few years purchased "new" weapons systems designed in the 1980's. However, 100 SU-27 airframes do not constitute a threatening air force when the skill to employ those aircraft and the ability to sustain and project them is in doubt.

While air superiority is desirable in any conflict,<sup>46</sup> it is only a condition that allows an air service to exploit the advantage. The PLAAF is still lacking the wide variety of support aircraft required to exploit control of the air. The most notable of the support capabilities that are lacking are those of command and control and airlift.

The lack of technology and industrial capability is also a major hindrance to PLAAF military advancement. It was only December, 1998 when the first Chinese-assembled, J-11 (SU-27) was put into service and while the J-7 and J-8 are produced in China,<sup>47</sup> despite their upgrades, they are antiquated and severely disadvantaged. The PLAAF's airlift aircraft, even while there several hundred internally produced airframes, do not supply adequate airlift capacity to sustain major troop and logistic deployment.

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they have a few hundred warheads, and most of them are married to a delivery vehicle like an ICBM or an SLBM.

<sup>46</sup> John Warden, *The Air Campaign*, McLean Virginia, Pergamon-Brassey, 1989, p. xiii. "No nation with superior air forces has ever lost a war to the force of enemy arms." No doubt the Chinese have read Warden as "The Air Campaign" was the playbook for the air portion of the Gulf War. This is probably the reason the PLAAF has put incredible emphasis on the SU-27. The Flanker is seen by U.S. fighter pilots as one of the front line fighters employed by the former Soviet Union and one that is trained against at nearly every Red Flag exercise.

<sup>47</sup> *The Vital Guide to Military Aircraft*, pps. 38, 110.

Finally, China is still reliant on the former Soviet Union for aircraft production, sustainment and the associated technologies.

By comparison, the U.S. produces *all* of its tactical, strategic, and support aircraft internally. This cannot be understated. The technologies developed involved in producing fighter aircraft also play a large role in the development of other military and commercial aircraft as well. This technology therefore advances faster as the corporate knowledge is maintained within the industry and is advanced for reasons of profit rather than having to pay for “snapshots” of military technological capability. Much of the reverse engineering done by China only leads them to the technology of the last decade, not the next one. Effectively, as China’s suppliers of military advancements are unable to keep pace with the U.S., the Chinese are buying whatever second rate export equipment they can from suppliers like the former Soviet Union.

Because Soviet technology has yet developed sufficiently China will not be able to buy (F-22 and JSF type) 5<sup>th</sup> generation aircraft, nor is it likely they will be able to steal the technology and then engineer it into next generation fighters. The timeline for development could be at least a decade once the “secrets” are acquired, by which time the U.S. aircraft industry will be fielding the follow on generation of aircraft or weapons technology. This buying or stealing of aircraft technology is very expensive and does not come with the associated corporate knowledge in the industry to replace and modernize systems. China’s aircraft industry still does not produce comparable ground attack, transport, tanker, command and control, airborne early warning, and electronic warfare aircraft as these technologies have not trickled down into the production of other aircraft

thereby making its aircraft industry more profitable and speed the development of further innovation.

The People's Liberation Army Navy (PLAN) also has similar shortcomings when it comes to air power. The PLAN does not have an operable aircraft carrier or the planes that go with it. Hence, there can be no development of joint air and sea power doctrine and therefore there is no significant joint training. Any truly successful operation or invasion is only possible with joint doctrine and air superiority. In fact, no country has won a major conflict without air superiority since WWII. China does not have the doctrine, training, sustainment capability, nor the ability to continuously modernize its air and sea capabilities.

Aside from the inability of Chinese industry to independently produce all of its own equipment, the PLAAF and PLAN cannot even begin to develop the doctrines that will ensure effective joint employment and create the training scenarios and exercises required to keep air and naval command structures proficient in land and naval based joint combat operations. Currently, the PLA does not possess comparable C4I (command, control, communications, computers, and intelligence) infrastructures to conduct large, joint force operations.<sup>48</sup> The integration of air, land, and sea forces in military operations is quintessential when your potential opponents are trained in, and operate jointly, with the United States.<sup>49</sup> The development of these doctrines and combining different service forces can only begin to take place after all of the required equipment has been in place for many decades and considerable practice and time has

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<sup>48</sup> Gill and O'Hanlon.

<sup>49</sup> The U.S. military trains officers from aligned countries like Japan, South Korea, and Taiwan at its intermediate and senior service schools and war colleges. The U.S. also trains and exercises with the pilots of only politically aligned or strategically advantageous countries.

elapsed to embrace these new styles of combat and the intellectual inertia of previous military regimes fades away. China is just now beginning to embrace what the U.S. has taken the last 60 years to refine.

Regardless of all the weapons purchases and technological upgrades, when comparing total assessed capability, equipment and continued sustainment, (read technology and military spending) China is still far behind the U.S. and any coalition group that it could be expected to face in a major conflict.<sup>50</sup> It is practically a given that if China were to engage in a major military conflict, their opponent would not be going it alone. The U.S. has made it perfectly clear that it will continue to come to the aid of any country of interest so threatened<sup>51</sup> and would certainly have an alliance advantage.<sup>52</sup>

The bottom line with respect to China's military is that it is not ready to fight a major regional conflict where the U.S. will be in opposition. The intentions of Jiang Zemin and the PLA indicate that China will continue to invest billions toward their goal to become a competitive world power, capable of force projection; even at the risk of falling into budgetary hardship. So great is the desire that China would risk international conflict to steal nuclear weapons technology,<sup>53</sup> buy influence with U.S. officials capable of giving away military secrets, and play chicken with hi-tech U.S. reconnaissance

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<sup>50</sup> *U.S. and Asia Statistical Handbook*, pps. 47, 63. U.S. military budget for 1999 was 274.8 billion while China's military budget was estimated between 12 and 40 billion (US) and these figures are estimated to be low considering research and development, weapons purchases and foreign military sales. (See A. James Gregor, *Qualified Engagement, U.S. China Policy and Security Concerns*, online edition, Naval War College Review, Spring 1999, URL: <http://www.nwc.navy.mil/press/default.htm>. 6 April, 2002.)

<sup>51</sup> *Strategies for U.S. Relations with China*, Kim R. Holmes & James J. Przystup, Washington DC, 197, p. 142. This references the 1995 and 1996 shooting of ballistic missiles near ports in Taiwan where Chinese military exercises in the region were seen to be a direct threat to Taiwan due to rhetoric about Taiwan joining international organizations as a sovereign nation and to influence their elections. The U.S. deployed two carrier battle groups to the region forcing China to soften their posture.

<sup>52</sup> *U.S. and Asia statistical Handbook*, pps. 47, 63. The U.S. maintains security alliances with Japan, South Korea, Australia, the Philippines, and Taiwan. China has similar agreements with only Burma, North Korea, and Pakistan. While North Korea fields a relatively modern military, Burma's is non-existent, and Pakistan currently has a partnership with the U.S. in the war on terror.



aircraft.<sup>54</sup> There is no doubt that a missile defense system would only decrease the moderate capabilities paid for by the PLA and further degrade their credibility.

## **Chapter Six Intentions**

To gauge the direction of military-economic intentions in China we go back to Li Jijung's address on China's nuclear strategy.

China's nuclear strategy is purely defensive in nature. The decision to develop nuclear weapons was a choice China had to make in the face of real nuclear threats. A small arsenal is retained only for the purpose of self-defense. China has unilaterally committed itself to responsibilities not yet taken by other nuclear nations, including the declaration of a no first use policy, the commitment not to use or threaten to use nuclear weapons against non nuclear states and in nuclear free zones. Nor does China advocate, encourage, or engage in the proliferation of nuclear weapons. The People's Republic of China has not helped any nation to develop nuclear weapons. In short, China's nuclear strategy is completely defensive, focused only on deterring the possibility of nuclear blackmail being used against China by other nuclear powers.

All of what he says is empirically correct and can be backed with fact and demonstrations of the behavior of the PRC along the lines solely in the nuclear arena. In fact, Li makes a rather big show of stomping his foot about how defensive and peaceable the PRC is in this realm. In his very next statement, though, Li starts to spin Chinese intention as he tries to minimize and "sell" the Chinese quest for military greatness.

China's defense spending has been kept at a very low level for more than a decade. Since 1979, reform, opening up, and economic development have been our cardinal national policies. Defense spending has remained low. Whether in absolute terms, in per capita terms, or in terms of the share of

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<sup>53</sup> *The Cox Report*. U.S. nuclear warhead technologies were alleged to be stolen by the Chinese.

<sup>54</sup> Larry Wortzel, *China: Enough is Enough*, online edition, Knight-Ridder/Tribune News Wire, URL: [www.heritage.org/views/2001/ed042501b.html](http://www.heritage.org/views/2001/ed042501b.html). 7 November, 2001. China held a damaged US Navy EP-3 just as the U.S. held Chinese F-8s that were supposed to be given U.S. radars. Following the events at Tiananmen, the U.S. which had agreed to upgrade the F-8s, stopped military trade and held the aircraft. When the U.S. finally agreed to give the jets back, five years later, the U.S. charged China for the storage. It was no wonder that when China decided to give back the EP-3 it charged the U.S. for expenses and no doubt search the aircraft and analyze the equipment.

China's gross national product, our defense budget is much smaller in comparison to those of the developing countries or, for that matter, most of the developing countries around us. Defense spending has been limited to satisfy basic defensive needs in accordance with China's peaceful foreign policy and our commitment to economic development.

Statistically, what is said above is indeed factual, but what is missed by the “gentle” reader is the fact that realistically Chinese spending on arms has increased like few other countries. If given the Chinese government's estimates for military spending, which are the lowest of any estimates, the increase alone in military spending in China would be more than twice the entire military budget for North Korea.<sup>55</sup> So when Jijung states that, “defense spending has remained low,” he does not qualify his statement with respect to spending totals and is deceptive about the true nature of the total amount spent under a “per capita” guise.

Further contradiction and “spin” are evident in his stating that, “*Defense spending* has been limited to satisfy basic *defensive needs* in accordance with China's *peaceful foreign policy* and our commitment to economic development.” In the use of the phrase *defensive needs* he is generalizing the purchase and development of power projection weapons like aircraft carriers and tanker aircraft under the misnomer of *defense spending* as these are clearly systems that enhance *offensive* capabilities.

Furthermore, he slips in the phrase “*peaceful foreign policy*” when China's foreign policy has been nothing but antagonistic and frustrating where its (hegemonic) interests are concerned. The only time China's foreign policy has been peaceful or

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<sup>55</sup>U.S. and Asia Statistical Handbook, p. 63. The “official” Chinese figure for military spending was 12.6 billion (US) but estimates range as high as 40 billion (US)(or higher, see previous discussion of Chinese spending). Assuming the “official” increase of 14 percent is correct and splitting the distance on estimates, in dollars not analyzed in “per capita” terms, the increase would be 3.2 billion (US). As the per capita calculation divides the number over 1.3 or so billion, it decreases in significance (approximately) by a factor of 10, in the case of Japan, as Japan's population is 1/10<sup>th</sup> that of China's. Accurate numbers are also

accommodating has been when its international interactions bring greater commerce (read, money to national coffers) or in external matters where international cooperation (war on terror) can be used as an idiosyncratic credit to draw attention away from internal affairs and human rights violations. Clearly, the statements manipulate the figures to be statistically correct and then spin any true intention while leaving out the pertinent realities. This leaving out the pertinent facts method foreshadows what can be expected in China's rhetoric in response to missile defense.

## **Chapter Seven**

### **Missile Defense**

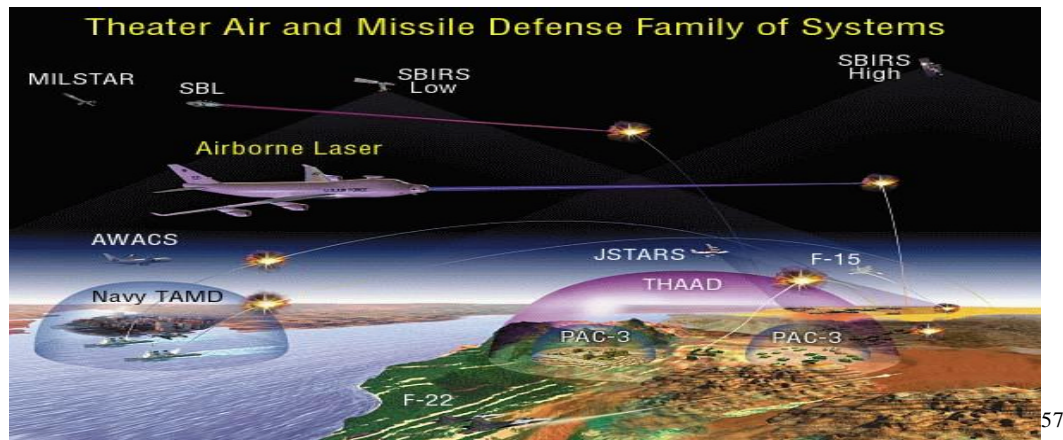
Missile defense has become a serious concern to Chinese military planners and diplomats in the last few years. The current U.S. doctrine in missile defense calls for a layered approach to eliminating missiles launched at the U.S. or in any theater where the system may be deployed.<sup>56</sup>

The "layers" to be defended are actually the phases of flight where a missile would be engaged. The boost phase would be detected by space-based radars and ascending missiles would be intercepted and destroyed with direct energy weapons from either a space based laser (SBL) or an airborne laser (ABL). This is the most advantageous phase of flight destroy missiles. The fragmented pieces of the destroyed projectiles may actually fall back on, or near, the country that launched them. To intercept and destroy missiles in this phase of flight actually has a deterrent effect as

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difficult to attain as the military runs its own enterprises and weapons sales and purchases are often not "officially" recorded.

<sup>56</sup> *Space Policy Project: Special Weapons Monitor*, online edition, Federation of American Scientist, URL: <http://www.fas.org/spp/starwars/program/index.html>. 21 Nov 2001.



countries may choose not to develop ballistic missile delivery systems in the future for fear of having their missile fall on their home territories in pieces.

The second layer of defense comes during the mid-phase of the missile's trajectory where they are still vulnerable to weapons used in the first phase but also within the employment parameters of theater high altitude air defense (THAAD) missiles. These missiles can be ground or air launched to defeat an ICBM by direct intercept. This direct intercept, however, has also been the most difficult engineering problem for THAAD designers as the speed at which both missiles travel is several times faster than sound and the ranges between them measures in hundreds of miles.

The final layer of defense comes from missile systems which are already in existence like the Patriot and Avenger. This is the last line of defense and one that could be employed from ground or sea bases. The difficulty and gravity of shooting down nuclear missiles in the final layer of defense lies in the reality that a "direct hit" kill will be required to destroy an incoming warhead and even then the nuclear device may have already armed and will certainly fall in the defended territory.

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<sup>57</sup> Ibid

The critical assessment of missile defense is not so much what the systems are or when they will be operational but how it will affect the weapons systems China paid so dearly to buy. Certainly, the credibility of the limited number of long-range nuclear missiles will come into question as their flight time will allow ample opportunity for layered missile defenses to react and short range missiles will be susceptible to end-game defenses.

Less considered, however, is the vulnerability of aircraft to missile defense. Aircraft which might have to fly the 200 or so miles to Taiwan will be more vulnerable as they are comparatively large targets, moving predictably, and at much lower speeds. With good weather, these aircraft would be vulnerable to airborne or space lasers. In any weather all the normal defenses, such as opposing fighters and surface to air weapons like the Patriot, will have Chinese systems in their sights. In both cases, missile defense could be (and most probably is) seen by the Chinese as direct threats to their nuclear deterrent force and the power projection capability found in their ever-growing air force.

Although the reality of employing a true “missile shield” is years away, the Chinese see this as a threat to their ability to act as a credible military and nuclear power. Chinese objections to missile defense insist that it will upset the “nuclear balance” in the world and therefore be destabilizing.<sup>58</sup> The reality is that, if deployed in the Asian-Pacific region, TMD (theater missile defense) could greatly decrease the potential offensive capacity of the China’s nuclear and conventional missile arsenal.

The key point to consider is that in any invasion of Taiwan scenario the first step would be to eliminate or neutralize the air forces of Taiwan or any other country whose air forces would be land based. This would entail launching waves of conventional

missiles at the opposing air infrastructure in the form of airfields. China knows that it must achieve air superiority and the way to achieve that is through the use of thousands of conventional missiles aimed to render opposing air forces unusable. Any missile shield decreases the likelihood of a successful missile attack.

ABM critics would say that the success of missile defense is still years away and even then it has only a limited potential. In fact, not only has the technology advanced far enough to be capable against missiles<sup>59</sup> but given the history of the testing and development of systems like the ABL (airborne laser), missile defense could be used against other weapons platforms,<sup>60</sup> like the SU-27, which China has doled out so much money to acquire.

The fact that the a complete TMD does not already exist is a point which is rather mute as it appears with the U.S. pulling out of the ABM treaty, President Bush has marked the course for U.S. defense initiatives. For the purpose of assessing Chinese reaction to BMD and TMD, this analysis assumes that the system will exist at some point in the near future and it is already seen by China as a threat to its deterrent force structure (nuclear missile inventory) and its conventional air and missile forces.

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<sup>58</sup> Mufson and Milbank, p. A40.

<sup>59</sup> The Theater High Energy Laser (THEL) has been successfully tested against simultaneous, mortar-sized targets.

<sup>60</sup> Robert W. Duffner, *Airborne Laser: Bullets of Light*, New Plenum Press, 1997, p. 290. When the airborne laser laboratory was developed in the 1970s and 1980s, the initial “proof of concept” tests were to actually shoot down air to air missiles as they were shot at the converted KC-135 aircraft which contained the laser. This was accomplished in 1983. That same year, as further “proof of concept”, the test aircraft also shot down an aircraft in flight. Considering the size of an air to air missile and its “corkscrew” trajectory, this is seen as a tremendous feat of technology and very telling as to how effective the system could be on larger targets, like an ICBM or an aircraft, with more regular flight paths.

## **Chapter Eight Chinese Response**

### Arms Race

The purpose of this chapter is to determine what the Chinese response will be to missile defense as the U.S. develops and deploys it especially in the Asian Pacific region. The first thing that can be said is that any country developing a capability that will make China appear less credible will be met with rhetoric from the Chinese Communist Party (CCP) that states in no uncertain terms that the developing a defensive capability will not stabilize the current regional military balance but will result in an arms race. China has already thrown some of this type of rhetoric out into the media<sup>61</sup> and no doubt will turn up its volume as BMD and TMD come closer to being operational. The most common complaint can be predicted easily as China will be expected to declare and then show symptoms that missile defense is only going to cause another arms race.

### Technology Theft

The predicted arms race will become a self-fulfilling prophecy as China will continue to sell weapons on the sly in an attempt to boost their own client states' military capabilities and enrich the coffers for further PLA spending. Further than this, China will attempt to level the playing field by continuing to upgrade its own capabilities with advanced weapons production. This will be paid for by stealing foreign (U.S.) technology and trading for new advancements with any countries so inclined. The failure in this is that as the former Soviet Union falls further and further behind the U.S. technologically, it will be able to sell less capable weapons.

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<sup>61</sup> Dr. Nicholas Berry, *U.S. National Missile Defense: Views from Asia*, on line edition, CDI Library Press, URL: <http://www.cdi.org/hotspots/issuebrief/ch7/index.html>. 28 October 2001

### Increased Sales of Weapons of Mass Destruction

With fewer places to purchase new technologies and sell them downstream, China will increase its sales of older technologies. The hardware of missile systems that are being sold quietly to North Korea and across the Middle East will continue to fund the PLA but it can be expected that the softer wares of biological and chemical weapons and production technology will also be sold to any organization willing to pay. Organization is used here instead of country as in this day and age the most destructive militaries in the world are rapidly becoming terrorist organizations.

### Para-military Training

Equipment and technology are not the only wares China may have to offer. Training may become another cash cow for the Chinese. As terrorist camps are being shut down by the U.S. war on terrorism the PLA may be able to offer training in all types of areas both lethal and non-lethal. As airline training for terrorist groups in America has been halted with the flying training industry on full alert for potential terrorists, this offers a vacuum in supply for China to offer training to anyone as their training industry is not as transparent and controlled as in America.

### Computer Warfare

Information and computer warfare is also an area where the PLA could quietly attack foreign capabilities and charge for the training of future terrorists. Again, as China is mostly an undiscovered country to the rest of the world, destructive access to the World Wide Web could be executed from inside China with plausible deniability. China



will be able to keep its political distance from any such activities with its well practiced “see no evil” rhetoric.

### Economic Warfare

The world of high finance is also an area where China could both assist unlawful clients while it makes a tidy profit as well. Trading in futures for the airline industry were used in the September 11 tragedy by certain terrorist groups and China, with insider information of future events, could again make billions of dollars quietly through the Hang Seng where it controls regulatory commissions. Certainly in any of the aforementioned undertakings there are two recurring themes: money for China and proxy attacks on financial institutions.

### Butter for Guns

Money for China is one of the premier motivations for endeavors of the PLA and while all of these things may be taking place behind the scene, China will continue along its chosen path to reap the benefits of trade it has so shrewdly set up. All of its money-making enterprises will be put to use in the light of legitimacy as its entrance into the WTO and other trading organizations that will help build the China that Jiang has promised. Considering communist governments and the CCP’s propensity for corruption however, it follows that the majority of any riches gained from entry into the world of monetary legitimacy will not be funneled toward the enrichment of the Chinese people. The world will gladly take China in as a commercial partner but must separately try to

keep them from becoming more of a strategic competitor. History reminds us of the dangers of appeasement.<sup>62</sup>

What this means is that China will put on the happy face of international trade and suffer a few restrictions while they quietly build an armed force that is poised for worldwide instability and regional conquest. We can expect that China will not complain too loudly as missile defense is developed, but will quietly be stealing secrets, producing weapons, and continuing to build the PLA to a position of equality with the leading militaries of the world while neglecting its social programs. This is the danger of bringing China into the club of the world economy.

While all of the items mentioned above are some of the potential outcomes if the U.S. decides to bring missile defense on line, the other option would be not to continue with missile defense in the hope that China will cease its military enhancements. The simple fact that China has spent the last two decades building up to the point they are now would indicate that they are in no state of mind to abandon their efforts. It would be rather foolish to believe they would do anything else but continue to close the distance between their capabilities and the U.S. China operates in a comparative vacuum in this sense and no matter what incentives they may be given, or what threats may be issued, the CCP, and much less the PLA, still allows no interference with internal affairs and would not change their course. In this light the only thing left for the U.S. to do is to continue on its own course and develop missile defense systems while simultaneously trying to shape relations for the future. The final chapter of this assessment will suggest

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<sup>62</sup> Similar economic and industrial arrangements can be found in the appeasement policy that was used in relations with pre-WWII Germany. While there was a non-aggression pact between Germany and Russia, Hitler took that which was gained from the relationship and turned it into the military might that would

some of the shaping and precautions that could be taken to ensure that the histories of genocidal maniacs, arms races, and Cold Wars are not repeated.

## **Chapter Nine Shaping**

It is only prudent that some precautions are taken as the world gets ready to bring China into the fold of the world community on so many new levels. The conditions that must be set should be considered carefully before good intention turns into a bad reality. It was once said that good fences make for good neighbors, but in the case of China it would seem that the great wall has held too many secrets behind it for too long and some of the barriers to transparency need to come down to ensure that between world trade and missile defense, the world becomes a more productive and safer place.

### Influence through Trade

Exerting influence on China has always proven a difficult thing, so as the only area where they bend to outside forces is in trade, this is where world leaders must begin in hope of having any success. As much as China believed that under Clinton, trade and winning elections were the only things that mattered, so has the world community found China's soft spot and a potential avenue for changing their view.

### Non-military Incentives and Shaping

China must be included in all manners of non-military international endeavors. The Olympics is seen as a great place to start and Beijing has already been awarded the 2008 summer Olympics. China sees this as a great money maker, but the intrepid shaper of international politics sees this as a way to infiltrate China with millions of visitors

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move an army of over three million to invade the same Russia that was supplying it with the raw materials

carrying bags of international ideas. This goes much into shaping the minds of the Chinese population as does educating thousands of Chinese students in America every year.<sup>63</sup>

#### Non Technology Education Incentives

As far as the Chinese student population abroad is concerned, the U.S. and other countries who school Chinese students need to offer incentives for pursuing academic paths that do not have technical or military potentials. This could mean offering scholarships or financial incentives to students earning degrees in the humanities. It could serve the purpose of integrating China into the world community if these students found the incentives to learning about the democratic endeavors and human rights that the rest of the free world takes for granted. Although another Tiananmen is not the desired outcome and certainly the West would not want to sponsor outright demonstration and societal disruption in China, common experiences of controlling corruption and ideas of individual liberty and self determination would make for a more constructive conversation.

#### Facilitate Cultural Interaction

The more that each world citizen knows about the hearts and minds of the rest of the world, the more meaningful any interaction can be between the different cultures. The internet has become the most popular medium for modern human interaction. It has established a means to share cultural experiences and has brought people together who may be worlds apart. Along cultural lines, facilitating personal interaction through the

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to make war.

<sup>63</sup> White, Tyrene, ed. *China Briefing 2000: The Continuing Transformation*, New York: M. E. Sharpe, 2000, p. 264 There are over 50,000 Chinese college students being educated in America.

shared experience of the internet could decrease the gap between all populations involved.

These exchanges between cultures of the East and those of the West should only be on a non military level. Encouraging participation in cultural areas can only bring all peoples closer together. Exporting all things that are cultural and easily consumed by the greater Chinese population seems a constructive beginning. MTV and the media (entertainment) are two influences that shape and offer a communal experience that can be shared across the oceans. When populations have common experiences then there a real foundation can be built for productive exchange and cultural understanding.

#### Increase International Involvement

Enlisting China into more peace oriented roles for the PLA or the PAP could also diversify what these armies believe is their role. Certainly those with military training could be put to good use in peace keeping or humanitarian operations. To make world order a goal for the Chinese would give their military something to do other than finding out ways to take indirect shots at the West and prepare for invasions to recapture lands to which it has very weak claims. Caution must be taken when involving the PLA into world peace activities to ensure that their involvement does not lead toward the acquiring of western methods of warfighting. This could also be a potential way to get westerners into China as coordination and training must take place. The real benefit will be that where the West has eyes and ears in China these observers could either stem the tide of human rights violations with their mere presence, or they become observers in their own right while inside China.

#### Increase Security

As far as methods of western warfighting and military technology, the U.S. needs to ensure that security is airtight on all new weapon systems and on technologies. Avoiding another Los Alamos debacle should be an imperative to the U.S. The potential to give up secrets on space-based systems and direct energy weapons technologies would only increase the potential of China reaching its goal of military equivalence. This would only lead to more of the new money being spent on the military and not on improving the lives of the Chinese population.

#### Secure Foreign Assistance Against Proliferation.

This goes for other countries as well. Russia could play a pivotal part and be offered incentive for non-military exchange with China. South Korea and Japan could also be offered opportunities to warm relations with China. This could come in the form of the lifting of trade barriers and concrete planning to reduce trade imbalances between these countries as well as with the U.S.

Along the lines of trade and arms, military non-proliferation trade agreements need to be structured to ensure that terrorist organizations and countries with destructive intentions are kept from buying offensive capabilities from not only China but all countries who would sell the weapons of war. This would certainly keep weapons out of the hands of bad actors but could also limit the influx of cash required to advance the PLA. Again, astute diplomacy would be required lest U.S. sales to countries in the Middle East be highlighted and brought into question.

#### Reform Assistance

Finally, it seems that China has been in a state of evolution since Mao “liberated” China some 50 years ago. This evolution has always sprung from the strength of over a

billion of its citizens who now find their worlds being bombarded by ideas of a new and modern world; the internet, democracy, MTV, day trading, human rights, self determination, individual liberty, etc... While the leaders change every fifteen or twenty years, the people remain the strength and the hope of their country. The beginning of a new day is about to dawn on China and whether it culminates with a change in the government, war, or revolution, change is not far on the horizon. Incentives for democratic reform must be offered and would certainly come pouring in from the rest of the free world. Most importantly, the U.S. and the world must be ready to help China transition to whatever form it chooses next and offer assistance and allow it to become one of the cornerstones of a new worldwide community.

## **Chapter 10**

### **Conclusion**

The requirements for global stability have changed greatly in the past few years. While the last 50 years have been spent learning the lessons of nuclear deterrence and mutually assured destruction, new technologies have allowed the previous superpowers to step back from the brink and rethink their approach to global stability.

While the U.S. and the former Soviet Union were finding more peaceful solutions to lasting stability, China continued on a course to achieve superpower status and become the dominant military force in the Asian-Pacific region. When the U.S. decided to opt out of the ABM treaty and pursue missile defense technologies this put in question the future credibility of China's advancing military, on which it had spent billions, and its quest to become a respected military powerhouse.

Assessing whether or not the PLAAF and China's missile arsenal were already a great enough threat to thwart developing missile defense we find that China is still far enough behind that a military response is unlikely. The foreseeable responses are actions that only attempt to enhance China's military and act against regional and world stability and advance China's ability to become a regional hegemon.

To mitigate the effect of potential negative responses the U.S. must find ways to bring China away from the path that would lead to another arms race or even another Cold War. What this would entail is bridging the gap between the China and not only the U.S. but the rest of the world. By tightening the reins on potentially dangerous transfers of military technology and involving China in the endeavors of globalism, peacekeeping, and promoting cultural exchange it may be possible avoid the expense and threat of another Cold War and promote regional and world stability.



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